



## RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/820,809  
Source: IFW0  
Date Processed by STIC: 8/2/04

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 4.2 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 06/05/04):  
U.S. Patent and Trademark Office, 220 20<sup>th</sup> Street S., Customer Window, Mail Stop Sequence, Crystal Plaza Two, Lobby, Room 1B03, Arlington, VA 22202

## Raw Sequence Listing Error Summary

ERROR DETECTED	SUGGESTED CORRECTION	SERIAL NUMBER: <u>10/820,809</u>
ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE		
1 _____ Wrapped Nucleics Wrapped Aminos	The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."	
2 _____ Invalid Line Length	The rules require that a line not exceed 72 characters in length. This includes white spaces.	
3 _____ Misaligned Amino Numbering	The numbering under each 5 <sup>th</sup> amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.	
4 _____ Non-ASCII	The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.	
5 _____ Variable Length	Sequence(s) _____ contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.	
6 _____ PatentIn 2.0 "bug"	A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) _____. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.	
7 _____ Skipped Sequences (OLD RULES)	Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence: (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown) (i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading) (xi) SEQUENCE DESCRIPTION: SEQ ID NO:X: (insert SEQ ID NO where "X" is shown) This sequence is intentionally skipped  Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.	
8 _____ Skipped Sequences (NEW RULES)	Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence. <210> sequence id number <400> sequence id number 000	
9 _____ Use of n's or Xaa's (NEW RULES)	Use of n's and/or Xaa's have been detected in the Sequence Listing. Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present. In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.	
10 _____ Invalid <213> Response	Per 1.823 of Sequence Rules, the only valid <213> responses are: <u>Unknown</u> , Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence	
11 _____ Use of <220>	Sequence(s) _____ missing the <220> "Feature" and associated numeric identifiers and responses. Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section. (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)	
12 _____ PatentIn 2.0 "bug"	Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.	
13 _____ Misuse of n/Xaa	"n" can only represent a single <u>nucleotide</u> ; "Xaa" can only represent a single <u>amino acid</u>	



IFWO

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/820,809

DATE: 08/02/2004

TIME: 15:03:26

Input Set : A:\2004-04-09 Sequence Listing as filed.txt

Output Set: N:\CRF4\08022004\J820809.raw

3 <110> APPLICANT: Irving W. WAINER et al.

5 <120> TITLE OF INVENTION: COMPUTER-BASED MODEL FOR IDENTIFICATION AND CHARACTERIZATION

OF

6 NON-COMPETITIVE INHIBITORS OF NICOTINIC ACETYLCHOLINE RECEPTORS

7 AND RELATED LIGAND-GATED ION CHANNEL RECEPTORS

9 <130> FILE REFERENCE: 1173-1025PUS2

C--> 11 <140> CURRENT APPLICATION NUMBER: US/10/820,809

C--> 11 <141> CURRENT FILING DATE: 2004-04-09

11 <160> NUMBER OF SEQ ID NOS: 15

13 <170> SOFTWARE: PatentIn version 3.2

15 <210> SEQ ID NO: 1

16 <211> LENGTH: 23

17 <212> TYPE: PRT

18 <213> ORGANISM: Unsure

20 <220> FEATURE:

21 <221> NAME/KEY: misc\_feature

22 <222> LOCATION: (1)..(23)

23 <223> OTHER INFORMATION: Table 1 Delta Sequence - Transmembrane domain of ligand gated

ion

24 channel subunit

26 <400> SEQUENCE: 1

28 Glu Lys Met Ser Thr Ala Ile Ser Val Leu Leu Ala Gly Ala Val Phe

29 1 5 10 15

31 Leu Leu Leu Thr Ser Gly Arg

32 20

35 <210> SEQ ID NO: 2

36 <211> LENGTH: 23

37 <212> TYPE: PRT

38 <213> ORGANISM: Unsure

40 <220> FEATURE:

41 <221> NAME/KEY: misc\_feature

42 <222> LOCATION: (1)..(23)

43 <223> OTHER INFORMATION: Table 1 Gamma Sequence - Transmembrane domain of ligand gated

ion

44 channel subunit

46 <400> SEQUENCE: 2

48 Gln Lys Cys Thr Leu Ser Ile Ser Val Leu Leu Ala Gln Thr Ile Phe

49 1 5 10 15

51 Leu Phe Leu Ile Ala Gln Lys

52 20

55 <210> SEQ ID NO: 3

56 <211> LENGTH: 23

57 <212> TYPE: PRT

58 <213> ORGANISM: Unsure

pp 1,3-6

Invalid <213> response  
(see item 10 on Error Summary sheet)

60 <220> FEATURE:  
61 <221> NAME/KEY: misc\_feature

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62 &lt;222&gt; LOCATION: (1)..(23)

63 <223> OTHER INFORMATION: Table 1 Alpha 1 Sequence - Transmembrane domain of ligand  
gated ion

64 channel subunit

66 &lt;400&gt; SEQUENCE: 3

68 Glu Lys Met Thr Leu Ser Ile Ser Val Leu Leu Ser Leu Thr Val Phe

69 1 5 10 15

71 Leu Leu Val Ile Val Glu Leu

72 20

75 &lt;210&gt; SEQ ID NO: 4

76 &lt;211&gt; LENGTH: 23

77 &lt;212&gt; TYPE: PRT

78 &lt;213&gt; ORGANISM: Unsure

80 &lt;220&gt; FEATURE:

81 &lt;221&gt; NAME/KEY: misc\_feature

82 &lt;222&gt; LOCATION: (1)..(23)

83 <223> OTHER INFORMATION: Table 1 Alpha 3 Sequence - Transmembrane domain of ligand  
gated ion

84 channel subunit

86 &lt;400&gt; SEQUENCE: 4

88 Glu Lys Val Thr Leu Cys Ile Ser Val Leu Leu Ser Leu Thr Val Phe

89 1 5 10 15

91 Leu Leu Val Ile Thr Glu Thr

92 20

95 &lt;210&gt; SEQ ID NO: 5

96 &lt;211&gt; LENGTH: 23

97 &lt;212&gt; TYPE: PRT

98 &lt;213&gt; ORGANISM: Unsure

100 &lt;220&gt; FEATURE:

101 &lt;221&gt; NAME/KEY: misc\_feature

102 &lt;222&gt; LOCATION: (1)..(23)

103 <223> OTHER INFORMATION: Table 1 Alpha 4 Sequence - Transmembrane domain of ligand  
gated ion

104 channel subunit

106 &lt;400&gt; SEQUENCE: 5

108 Glu Lys Ile Thr Leu Cys Ile Ser Val Leu Leu Ser Leu Thr Val Phe

109 1 5 10 15

111 Leu Leu Leu Ile Thr Glu Ile

112 20

115 &lt;210&gt; SEQ ID NO: 6

116 &lt;211&gt; LENGTH: 23

117 &lt;212&gt; TYPE: PRT

118 &lt;213&gt; ORGANISM: Unsure

120 &lt;220&gt; FEATURE:

121 &lt;221&gt; NAME/KEY: misc\_feature

122 &lt;222&gt; LOCATION: (1)..(23)

123 <223> OTHER INFORMATION: Table 1 Alpha 5 Sequence - Transmembrane domain of ligand  
gated ion

124 channel subunit

126 &lt;400&gt; SEQUENCE: 6

128 Glu Lys Ile Cys Leu Cys Thr Ser Val Leu Val Ser Leu Thr Val Phe

129 1 5 10 15

131 Leu Leu Val Ile Glu Glu Ile

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Input Set : A:\2004-04-09 Sequence Listing as filed.txt

Output Set: N:\CRF4\08022004\J820809.raw

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132          20
135 <210> SEQ ID NO: 7
136 <211> LENGTH: 23
137 <212> TYPE: PRT
138 <213> ORGANISM: Unsure
140 <220> FEATURE:
141 <221> NAME/KEY: misc_feature
142 <222> LOCATION: (1)..(23)
143 <223> OTHER INFORMATION: Table 1 Alpha 6 Sequence - Transmembrane domain of ligand
gated ion
144          channel subunit
146 <400> SEQUENCE: 7
148 Glu Lys Val Thr Leu Cys Ile Ser Val Leu Leu Ser Leu Thr Val Phe
149 1          5          10          15
151 Leu Leu Val Ile Thr Glu Thr
152          20
155 <210> SEQ ID NO: 8
156 <211> LENGTH: 23
157 <212> TYPE: PRT
158 <213> ORGANISM: Unsure
160 <220> FEATURE:
161 <221> NAME/KEY: misc_feature
162 <222> LOCATION: (1)..(23)
163 <223> OTHER INFORMATION: Table 1 Alpha 7 Sequence - Transmembrane domain of ligand
gated ion
164          channel subunit
166 <400> SEQUENCE: 8
168 Glu Lys Ile Ser Leu Gly Ile Thr Val Leu Leu Ser Leu Thr Val Phe
169 1          5          10          15
171 Met Leu Leu Val Ala Glu Ile
172          20
175 <210> SEQ ID NO: 9
176 <211> LENGTH: 23
177 <212> TYPE: PRT
178 <213> ORGANISM: Unsure
180 <220> FEATURE:
181 <221> NAME/KEY: misc_feature
182 <222> LOCATION: (1)..(23)
183 <223> OTHER INFORMATION: Table 1 Alpha 9 Sequence - Transmembrane domain of ligand
gated ion
184          channel subunit
186 <400> SEQUENCE: 9
188 Glu Lys Val Ser Leu Gly Val Thr Ile Leu Leu Ala Met Thr Val Phe
189 1          5          10          15
191 Gln Leu Met Val Ala Glu Ile
192          20
195 <210> SEQ ID NO: 10
196 <211> LENGTH: 23
197 <212> TYPE: PRT
198 <213> ORGANISM: Unsure
200 <220> FEATURE:
201 <221> NAME/KEY: misc_feature

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202 &lt;222&gt; LOCATION: (1)..(23)

203 <223> OTHER INFORMATION: Table 1 Alpha 10 Sequence - Transmembrane domain of ligand  
gated ion

204 channel subunit

206 &lt;400&gt; SEQUENCE: 10

208 Glu Lys Val Ser Leu Gly Val Thr Val Leu Leu Ala Leu Thr Val Phe

209 1 5 10 15

211 Gln Leu Ile Leu Ala Glu Ser

212 20

215 &lt;210&gt; SEQ ID NO: 11

216 &lt;211&gt; LENGTH: 23

217 &lt;212&gt; TYPE: PRT

218 &lt;213&gt; ORGANISM: Unsure

220 &lt;220&gt; FEATURE:

221 &lt;221&gt; NAME/KEY: misc\_feature

222 &lt;222&gt; LOCATION: (1)..(23)

223 <223> OTHER INFORMATION: Table 1 Beta 1 Sequence - Transmembrane domain of ligand  
gated ion

224 channel subunit

226 &lt;400&gt; SEQUENCE: 11

228 Glu Lys Met Gly Leu Ser Ile Phe Ala Leu Leu Thr Leu Thr Val Phe

229 1 5 10 15

231 Leu Leu Leu Leu Ala Asp Lys

232 20

235 &lt;210&gt; SEQ ID NO: 12

236 &lt;211&gt; LENGTH: 23

237 &lt;212&gt; TYPE: PRT

238 &lt;213&gt; ORGANISM: Unsure

240 &lt;220&gt; FEATURE:

241 &lt;221&gt; NAME/KEY: misc\_feature

242 &lt;222&gt; LOCATION: (1)..(23)

243 <223> OTHER INFORMATION: Table 1 Beta 2 Sequence - Transmembrane domain of ligand  
gated ion

244 channel subunit

246 &lt;400&gt; SEQUENCE: 12

248 Glu Lys Met Thr Leu Cys Ile Ser Val Leu Leu Ala Leu Thr Val Phe

249 1 5 10 15

251 Leu Leu Leu Ile Ser Lys Ile

252 20

255 &lt;210&gt; SEQ ID NO: 13

256 &lt;211&gt; LENGTH: 23

257 &lt;212&gt; TYPE: PRT

258 &lt;213&gt; ORGANISM: Unsure

260 &lt;220&gt; FEATURE:

261 &lt;221&gt; NAME/KEY: misc\_feature

262 &lt;222&gt; LOCATION: (1)..(23)

263 <223> OTHER INFORMATION: Table 1 Beta 3 Sequence - Transmembrane domain of ligand  
gated ion

264 channel subunit

266 &lt;400&gt; SEQUENCE: 13

268 Glu Lys Leu Ser Leu Ser Thr Ser Val Leu Val Ser Leu Thr Val Phe

269 1 5 10 15

271 Leu Leu Val Ile Glu Glu Ile

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TIME: 15:03:26

Input Set : A:\2004-04-09 Sequence Listing as filed.txt

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277 <212> TYPE: PRT
278 <213> ORGANISM: Unsure
280 <220> FEATURE:
281 <221> NAME/KEY: misc_feature
282 <222> LOCATION: (1)..(23)
283 <223> OTHER INFORMATION: Table 1 Beta 4 Sequence - Transmembrane domain of ligand
gated ion
284          channel subunit
286 <400> SEQUENCE: 14
288 Glu Lys Met Thr Leu Cys Ile Ser Val Leu Leu Ala Leu Thr Phe Phe
289 1          5          10          15
291 Leu Leu Leu Ile Ser Lys Ile
292          20
295 <210> SEQ ID NO: 15
296 <211> LENGTH: 23
297 <212> TYPE: PRT
298 <213> ORGANISM: Unsure
300 <220> FEATURE:
301 <221> NAME/KEY: misc_feature
302 <222> LOCATION: (1)..(23)
303 <223> OTHER INFORMATION: Table 1 Epsilon Sequence - Transmembrane domain of ligand
gated ion
304          channel subunit
306 <400> SEQUENCE: 15
308 Gln Lys Cys Thr Val Ser Ile Asn Val Leu Leu Ala Gln Thr Val Phe
309 1          5          10          15
311 Leu Phe Phe Leu Ile Ala Gln
312          20

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**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/820,809

DATE: 08/02/2004

TIME: 15:03:27

Input Set : A:\2004-04-09 Sequence Listing as filed.txt

Output Set: N:\CRF4\08022004\J820809.raw

L:11 M:270 C: Current Application Number differs, Replaced Current Application No

L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date